



Best Barns USA Assembly Book

Revised November 20, 2013



the Easton - R

12'x16'

Manufactured by Reynolds Building Systems, Inc.

205 Arlington Drive Greenville, PA 16125 724-646-3775

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IMPORTANT INFORMATION ABOUT YOUR SHED KIT

Thank you for purchasing our shed kit. These instructions will construct a 12'x16' building. **If you received two books, use the one with the latest revision date.**

Read the instructions before starting the assembly of the building. If you have any questions about assembling the kit, call 800-245-1577. Business hours (8:00-5:00 ET) Monday thru Friday. After business hours call 724-866-HELP (4357) or email to help@barnkits.com.

The material that is included in our kit is listed on the back page. The optional floor package, if purchased, will be supplied by a local lumber supplier.

Our kit does not include the shingles, the quantity needed is listed on the back page. The siding is primed. You will need to apply a finish coat using latex acrylic paint.

Some of the framing lumber was used in the shipping pallet. Unpack the material from the pallets, then unscrew the bottom runners from the 2x4s. The bit for the screws is packed in the hardware bag. This material will be used for wall bracing and tie plates.

Most buildings are installed on a wood floor and the siding was designed to extend over the wood flooring. If the foundation is a concrete floor cut the siding flush with the bottom of the wall plate to prevent the concrete from contacting the siding.

Stacking the boards, according to size, will make them easier to find when needed. Some boards have colored ends. All the wall studs have black ends, stack these boards together. **Do Not** discard any material until your building is complete.

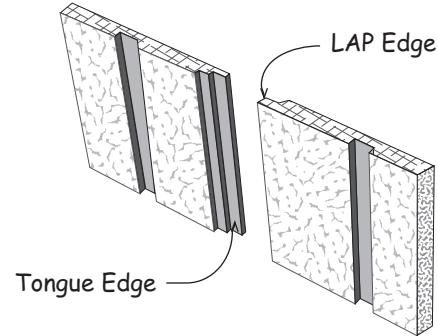
Before you begin construction, be sure to study this assembly manual. Also, obtain a building permit and check all pertinent building code regulations.

Thank you for your purchase.

Bill & Linda Rinella, owners

The siding is made in 4x8 sheets with grooves cut into the face, the long edge is beveled so that the siding overlays where they butt.

To identify which edge we want you to use, we will refer to the edge as either the 'LAP' Edge or the Tongue Edge. Nail siding with 8d galv. nails, spaced 12" apart.



Tool List

<input type="checkbox"/> Hammer & Phillips Screwdriver	<input type="checkbox"/> Power Drill/Screwdriver
<input type="checkbox"/> Framing Square & Level	<input type="checkbox"/> Measuring Tape
<input type="checkbox"/> Hand or Circular Saw	<input type="checkbox"/> 2 - 8' Step Ladders

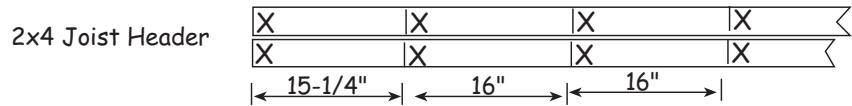
Always wear safety glasses when cutting or nailing!

Constructing Details for Deluxe Floor System

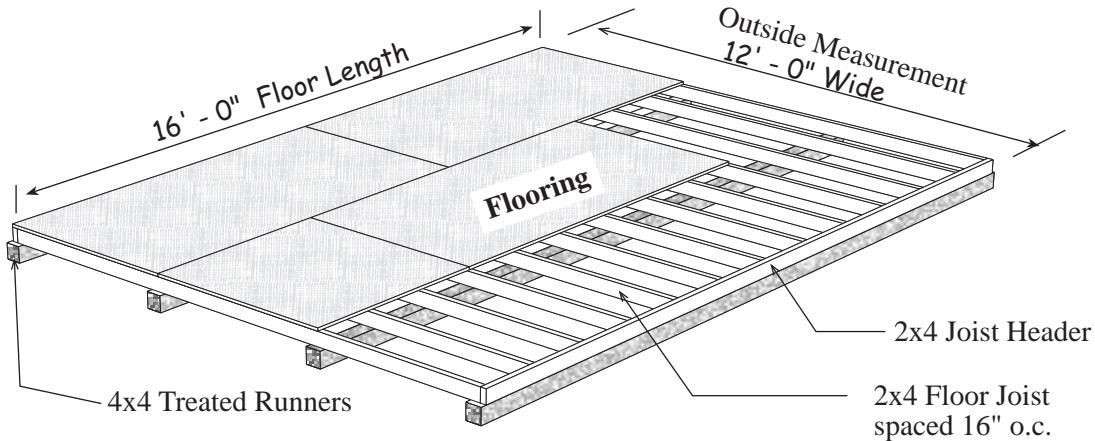
Deluxe floors include 4x4 runners, standard floors do not

Foundation size is 12'-0" x 16'-0". Check local building codes in your area, the construction may have to change. For a concrete slab, install sill sealer as a moisture barrier between the concrete and the wall plates. Foam sill sealer can be purchased at home centers in rolls 3-1/2" or wider.

1. Cut (2) two 2x4 joist headers to 16' - 0". Layout for 16" on center joist spacing. 'X' marks where floor joist will be placed.

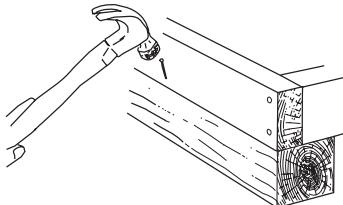


2. Cut 2x4-12' floor joist to 11'-9". Treated lumber may be thicker than 1-1/2". Take this into account when cutting the length of floor joists. Shorten joist measurements if necessary to obtain 12'-0" building width.



It is important that the floor be level and square. Square the floor as follows: before nailing the flooring, measure the floor diagonally (corner to corner). Then measure the opposite corners. These measurements will be the same if the floor is square.

Material Description	12' x 16' shed	
2x4 Joist Headers	2 pcs.	16'
2x4 Floor Joist	13 pcs.	12'
4x4 Treated Runners	8 pcs.	8'
Flooring 5/8" or 3/4"	6 pcs.	4x8
Screw Floor Nails	2 lb.	8d
Galv. Box Nails	2 lb.	16d



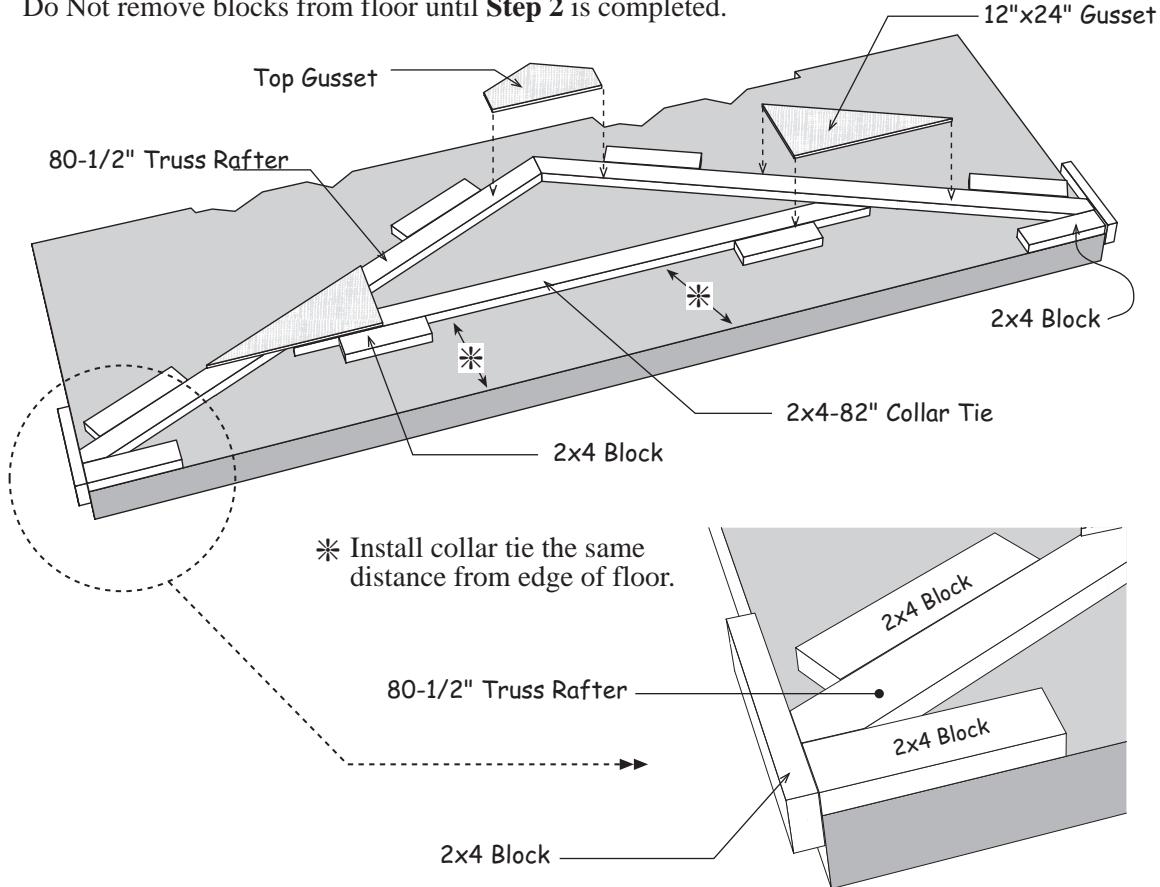
Nail 2x4 joist headers and floor joist to 4x4.

Step 1 Assemble Roof Trusses

 Building Tip: To aid in the assembly of the trusses, temporarily screw 2x4 blocks to the floor. This will insure that all the trusses are assembled the same. Use 2-1/2" screws. There are short 2x4s, *that may have an angle on one end*, supplied in the kit.

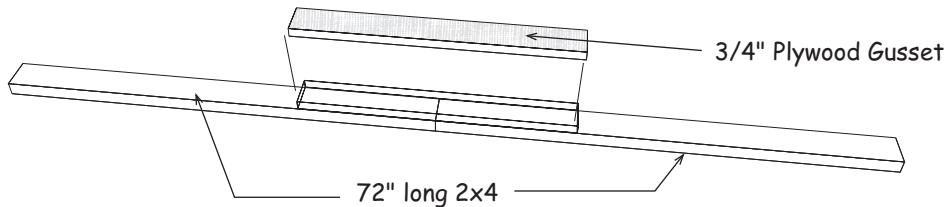
1. Screw 2x4 blocks to the 12' wide end of the floor, at the corner to trap the truss boards.
2. Place (2) two 80-1/2" long 2x4 Truss Rafters and a 82" long Collar Tie together as shown below. The Collar Tie has an angle cut on both ends. Affix 2x4 blocks around the 2x4s to hold them in place and enable all trusses to be built the same.
3. Secure the 2x4s at the top with a 8" x 20" wood gusset. Apply wood glue between the 2x4s and the gusset. Nail the gusset to the 2x4s with 6d common nails, 14 nails per gusset.
4. Install 12"x24" gussets to the ends of the collar tie. Glue and nail using 14 nails per gusset.
5. Turn this truss over and apply wood gussets to the opposite side.
6. Repeat to assemble (6) six more trusses.

Do Not remove blocks from floor until **Step 2** is completed.

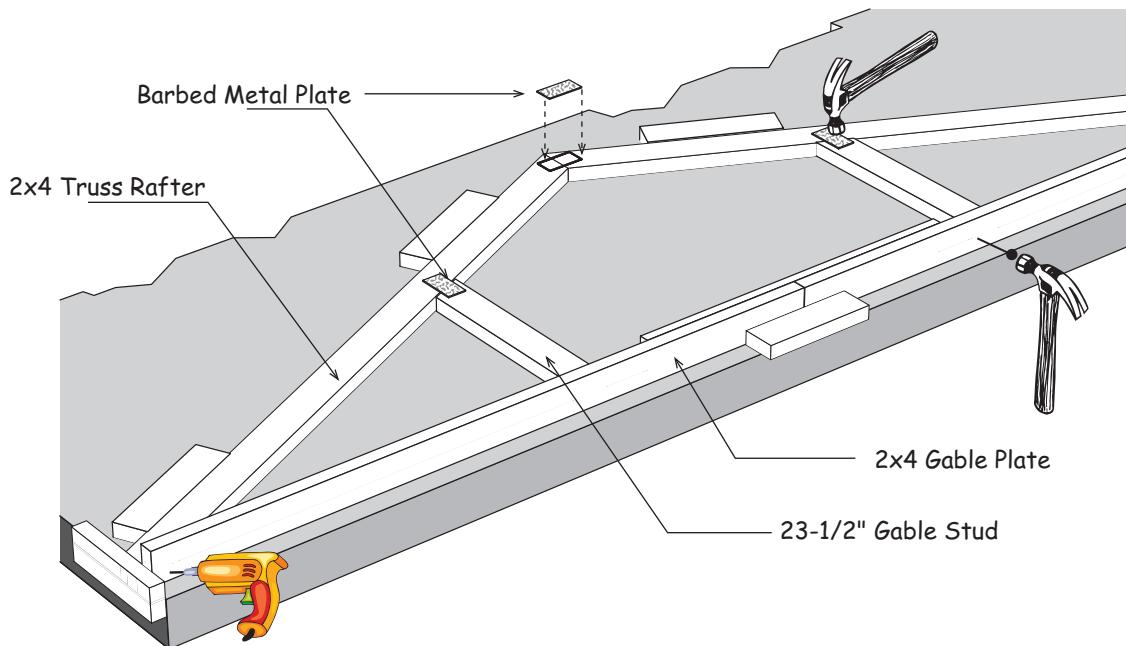


Step 2 Assemble Roof Gables

1. Butt (2) two 72" long 2x4s together and secure them with a 3-1/2" x 31-3/4" long plywood gusset across the top where they butt together. Use glue and 6d common nails. This will be used as the bottom plate on the roof gables.



2. Assemble another 12' long bottom plate.
3. Place (2) two Truss Rafters in the jig. Secure the top together with a barbed metal plate.
4. Reposition the lower 2x4 blocks to hold the gable plate assembled above, in place.

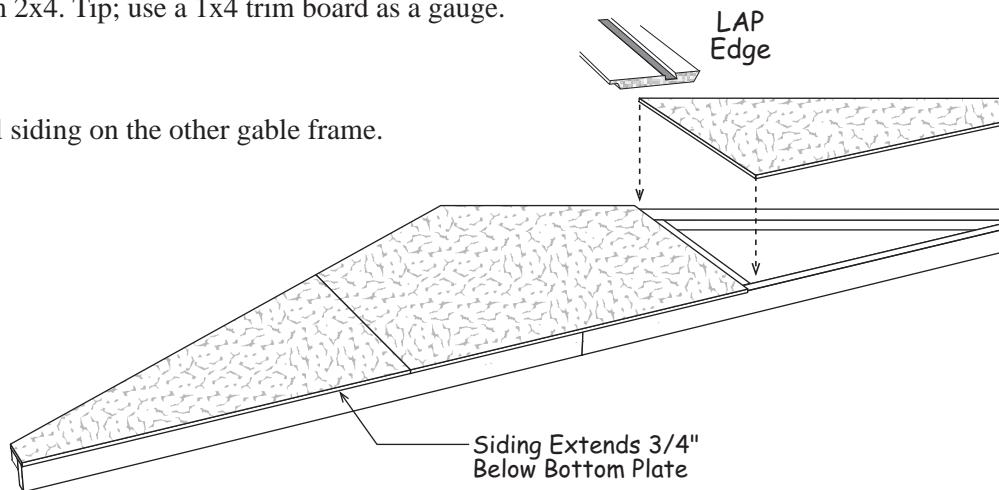


5. Secure the 2x4 Gable Plate to the Truss Rafter with a 2-1/2" wood screw.
6. Install (2) two 23-1/2" gable studs. Nail through the bottom plate with 10d sinkers and secure the top with barbed metal drive-on plates.
7. Repeat steps to assemble another gable. Remove the short 2x4 blocks.

Step 3 Install Siding & Trim on Gables

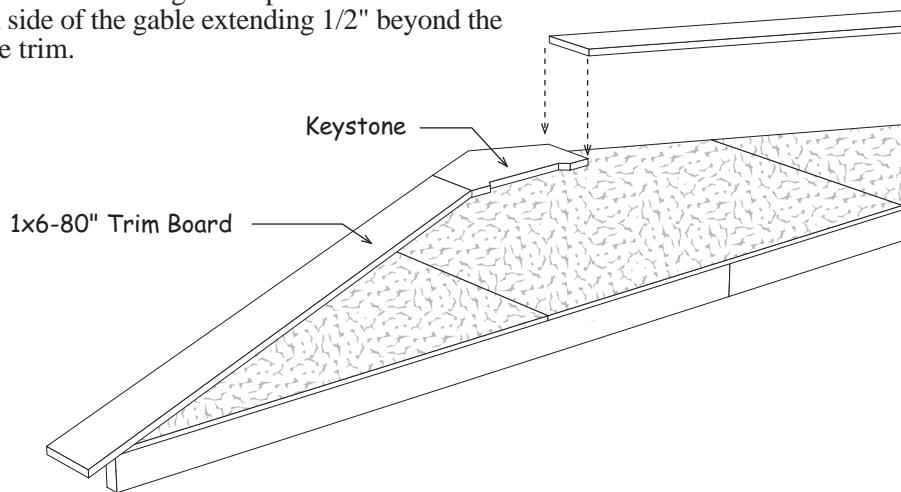
1. Select one of the gable frames. Turn the gable over letting the bottom plate overhang the floor so the gable lays flat.
2. Install gable siding using 6d galv. nails across the top of the 2x4 frame. Use 8d galv. nails across the bottom 2x4. The siding will extend $3/4"$ below the bottom 2x4. Tip; use a 1x4 trim board as a gauge.

3. Install siding on the other gable frame.



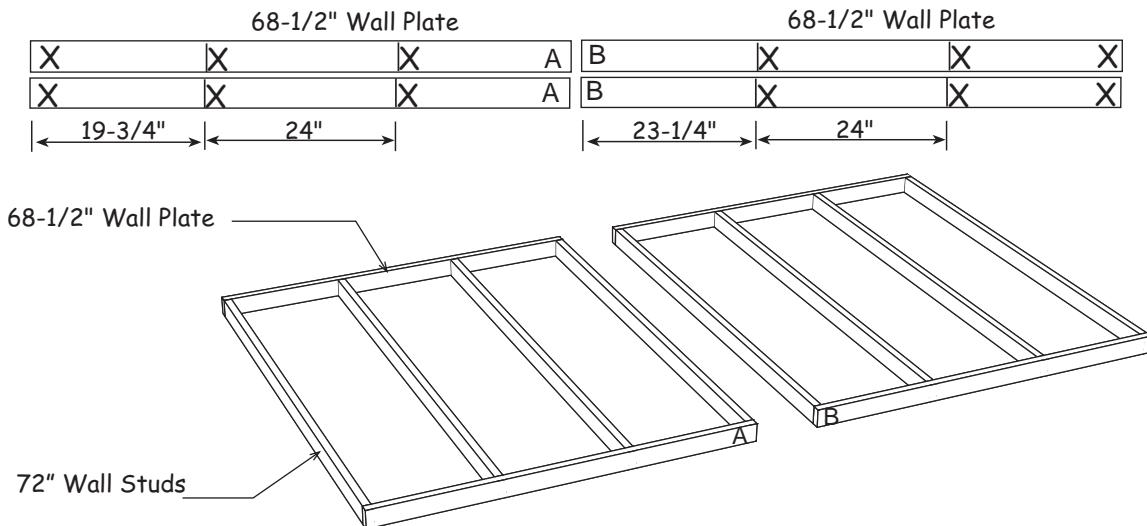
Tip; Paint the siding and trim boards before installing the trim.

4. Install a white pine trim board, called a 'Keystone', at the top center of the gable. Install this trim board extending $1/2"$ beyond the gable frame. This will permit the roof sheathing to butt into the trim when installed in a later step.
5. Install 1x6-80" long white pine trim boards on each side of the gable extending $1/2"$ beyond the gable trim.



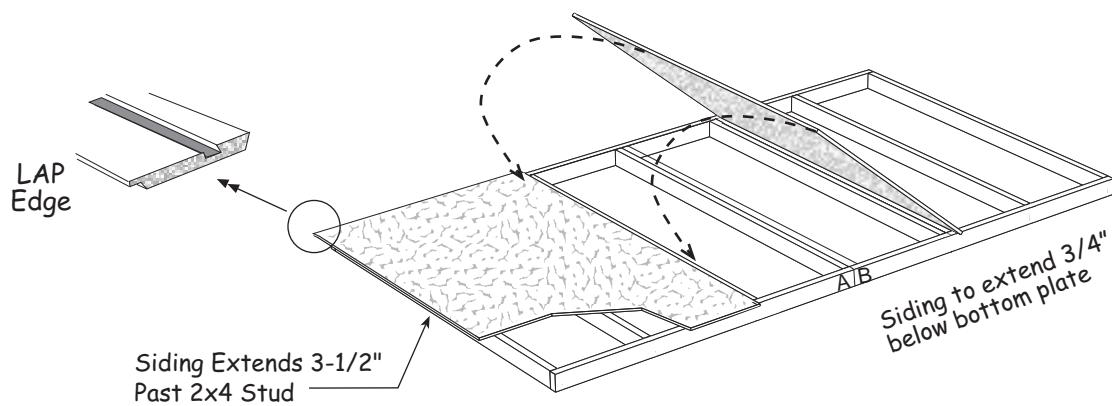
Step 4 Assemble 12' End Wall Panel

1. Position (4) four 68-1/2" boards together and indicate with 'X' marks where the wall studs will be located. Mark the ends that will butt together with the letters 'A' and 'B'.
2. Install (8) eight 72" long wall studs, between the wall plates, over the 'X' marks and where the plates meet. Use (2) two 10d sinkers at each end of stud.



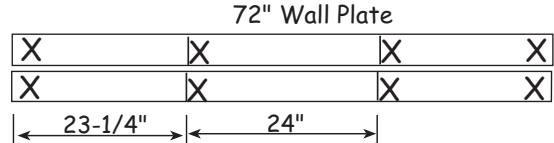
 **Select siding panels that are 75-3/4" in length for this wall panel.**

3. Nail wall frames together using 10d sinkers.
4. Square wall frame. Install the 1st siding panel with the 'LAP' edge extending 3-1/2" past the wall frame. The bottom will extend 3/4" below the bottom plate. Note; Cut the siding flush with the bottom plate if installing the building on a cement slab.
5. Install the other siding panels. Cut the last panel to extend 3-1/2" beyond the wall frame.

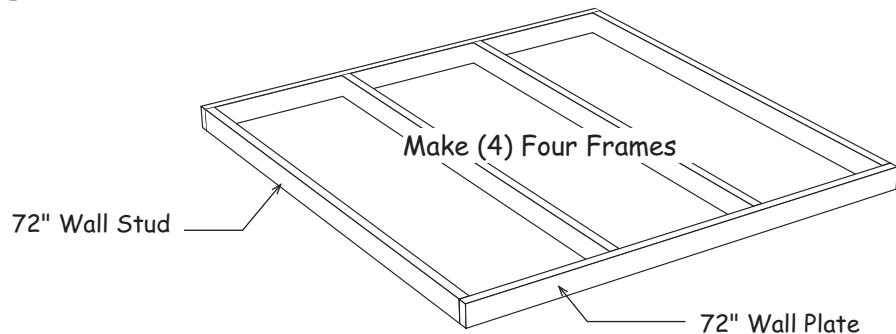


Step 5 Assemble Back & Front Wall Frames

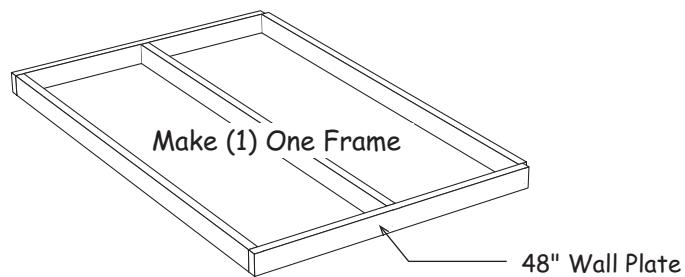
1. Position (2) two 2x4-72" boards together and indicate with 'X' marks, where the wall studs will be located.



2. Install (4) four 72" long wall studs between the wall plates

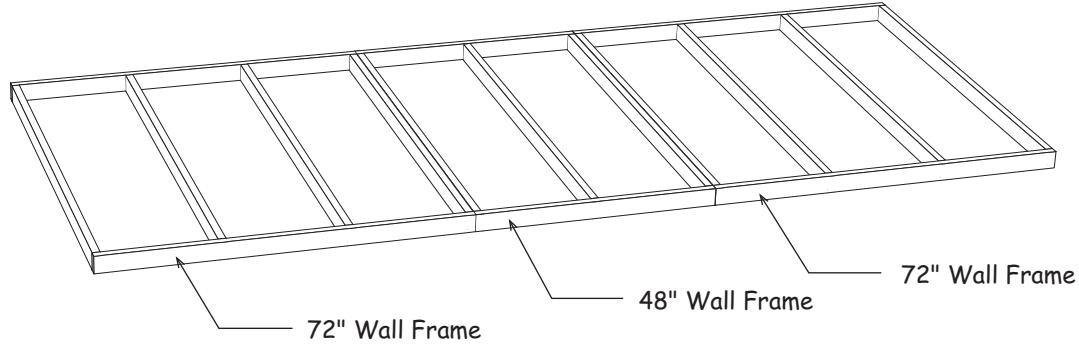


3. Repeat process to assemble (3) three more 72" long wall frames.
4. Install (3) three 2x4-72" wall studs between (2) two 48" long 2x4s. Install the stud in the center of the wall frame.



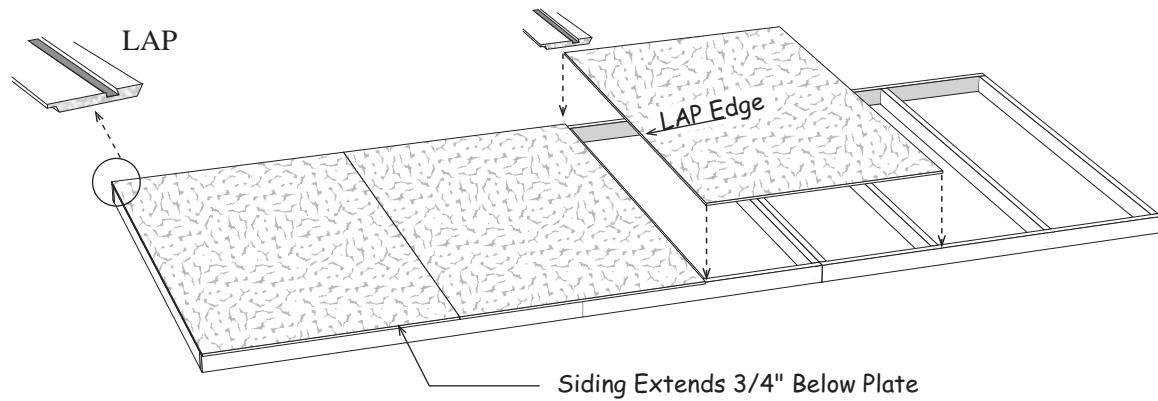
Step 6 Install Siding on Back Wall Frames

1. Position a 48" wide wall frame between (2) two 72" wall frames as shown below. Nail frames together with 10d sinkers.
2. Square wall frame. *Measure diagonally (corner to corner). The measurements will be the same when the wall is square.*



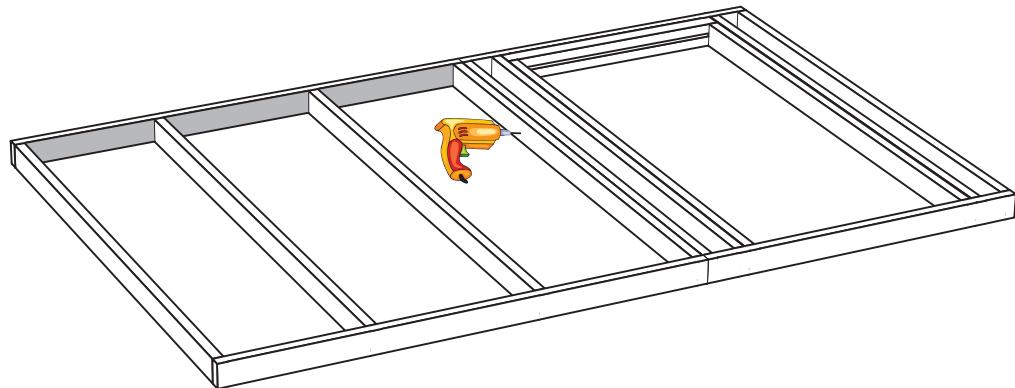
 Select siding panels that are 79-1/2" in length for the back wall and the front wall. When installed, the siding will extend 3/4" below the bottom plate and 3-3/4" above the top plate. Cut siding flush with the bottom plate if installing the building on a cement slab.

3. Install the first siding panel with the 'LAP edge' flush with the end of the wall and extending 3/4" below the bottom plate.
4. Install (2) two more siding panels. You can install the last siding panel now or after the walls are erected so the panel will be easier to handle.



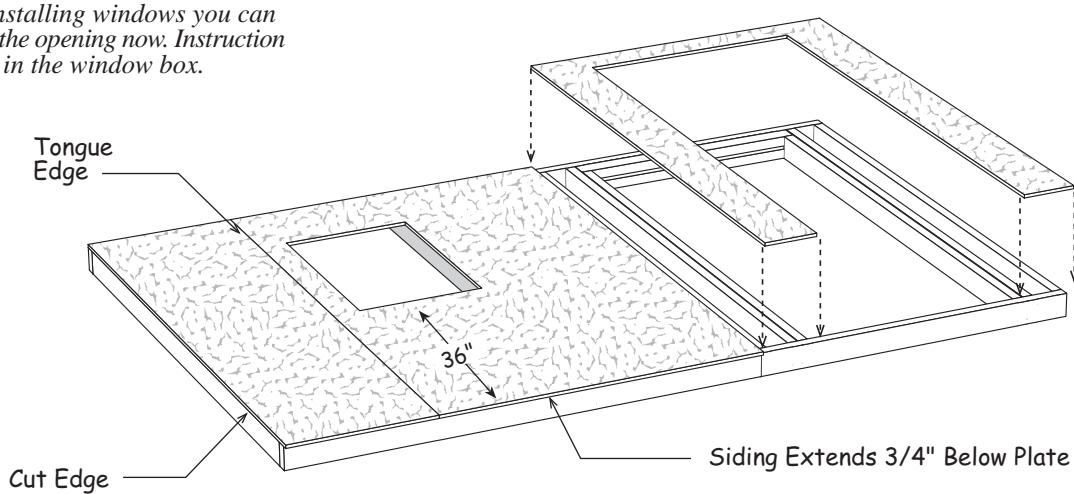
Step 7 Apply Siding to Front Wall Frames

1. Select one of the 6' wall frames and the 4' wall frame with the door opening.
2. Screw these frames together with 2-1/2" screws. Square the wall frame.



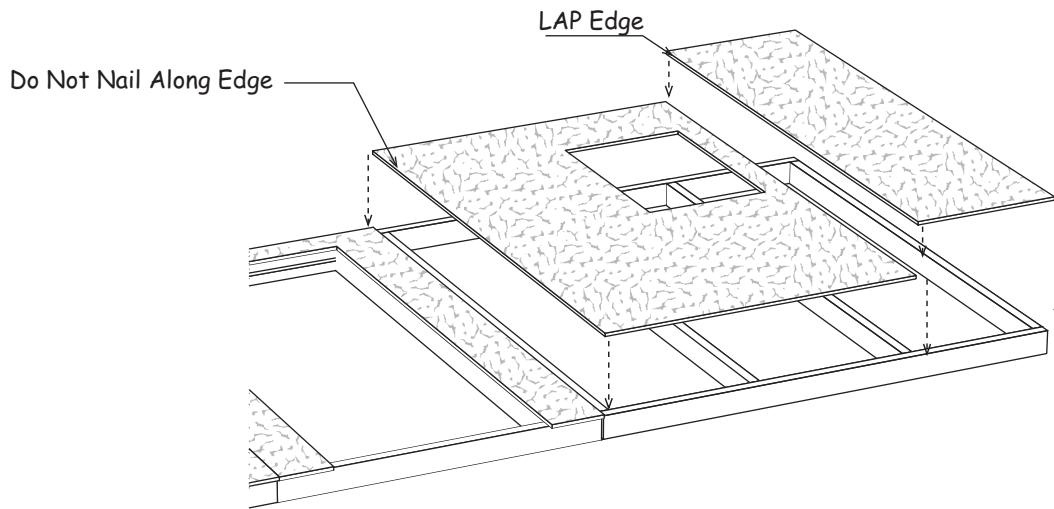
3. Select a 2' wide panel, *with the 'tongue' edge*, and install this panel with the 'cut' edge flush with the end of the wall and extending 3/4" below the bottom plate.
4. Install a full width siding panels.
5. Install siding panel with the door opening.

If installing windows you can cut the opening now. Instruction are in the window box.



Step 7 Apply Siding to Front Wall Frames Continued

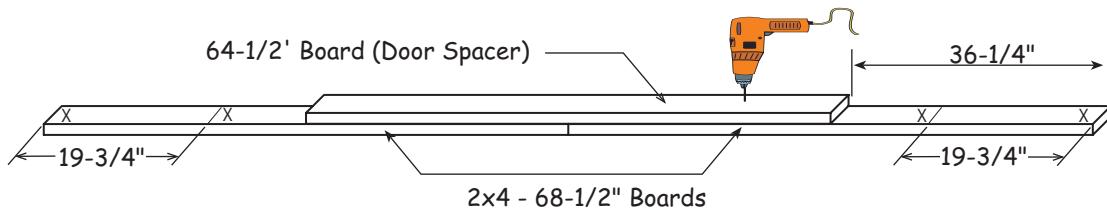
6. Butt the other 72" wall frame against the center door frame. DO NOT nail frames together. This will enable you to separate the wall panels making them easier to handle.



7. Install a full width siding panel. DO NOT nail the long edge that overlaps the door siding panel. You can nail this edge after the wall panels are installed later.
8. Install a 24" wide siding panel.
9. Separate wall panels.

Step 8 Assemble Bottom Plate with Door Spacer

1. Cut a 2x4-6' board to a length of 64-1/2". Butt (2) two 68-1/2" boards together. Center the 64-1/2" long 2x4 board (used as a door spacer) on top and screw the boards together using (4) four 2-1/2" wood screws.
2. Indicate where the wall studs will be located by drawing a line and placing an 'X' mark next to the line. The wall stud will be installed over, *covering*, the 'X' marks.

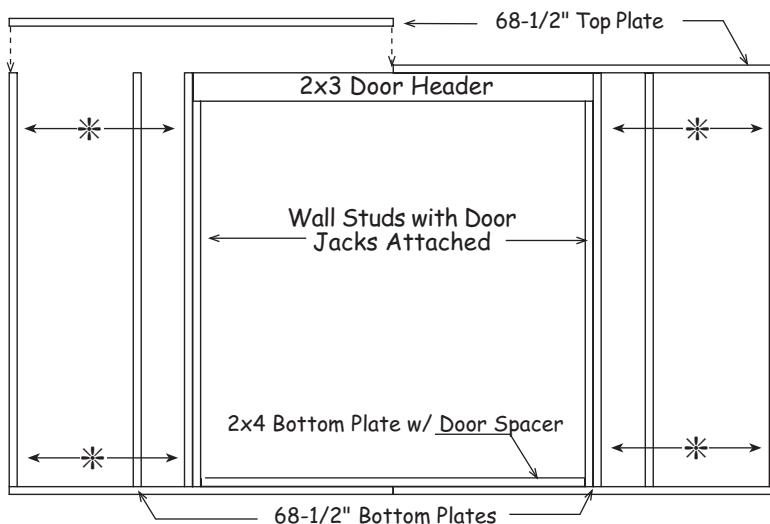


Step 9 Assemble Double Door Wall

1. Gather the material listed below to assemble the door wall.
2. Install (4) four 72" wall studs over the 'X' marks. Use (2) two 10d sinkers at each end of stud.
3. Install wall studs, *with the door jacks attached*, on each side of the door spacer.
4. Install door header on the door jacks.

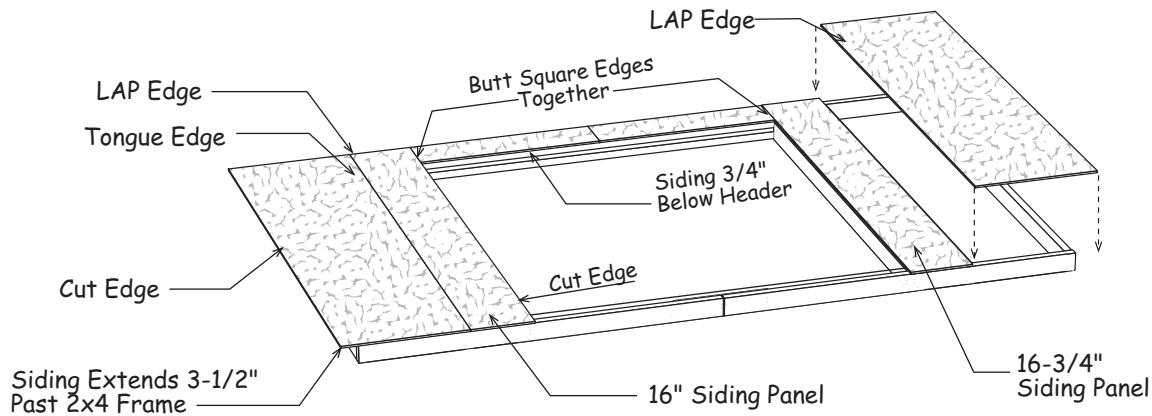
Material List	
2	68-1/2" Wall Plates
4	72" Wall Studs
2	72" Wall Studs with door jacks attached
1	Bottom Plate from Step 8

* Check measurements. They should be the same or the door opening will not be square!



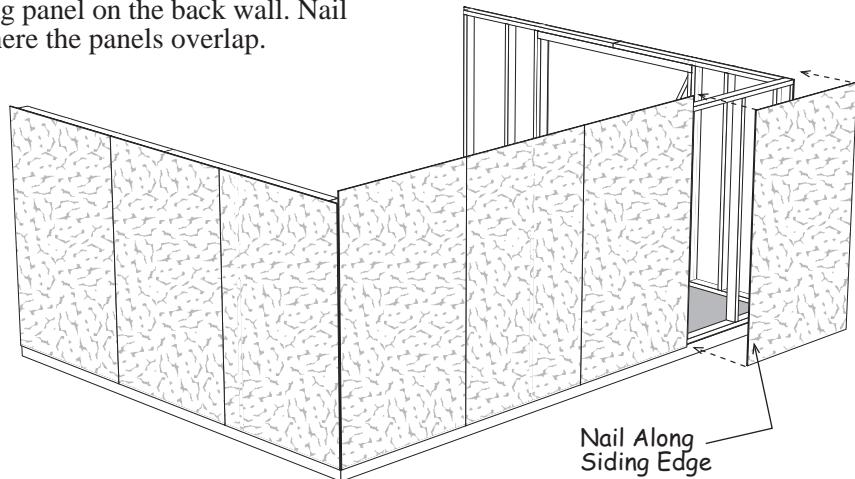
Select siding panels that are 75-3/4" in length for this wall panel.

5. Locate a 16" siding panel that has a 'LAP' edge. Position the 'cut' edge flush with the left side of the door opening. **Do not** nail the 'LAP' edge until the other siding is applied.
6. Select the 24" wide siding panel, *with the 'tongue edge'*, and install this siding panel at the left end of the wall frame as shown below. The siding will extend 3-1/2" beyond the frame.
7. Install (2) two 4-3/4" pre-cut siding panels over the door opening, flush with the top plate.
8. Install a 16-3/4" siding panel with the 'cut' edge flush with the side of the door opening.
9. Install the last siding panel. It will extend 3-1/2" beyond the 2x4 wall frame.

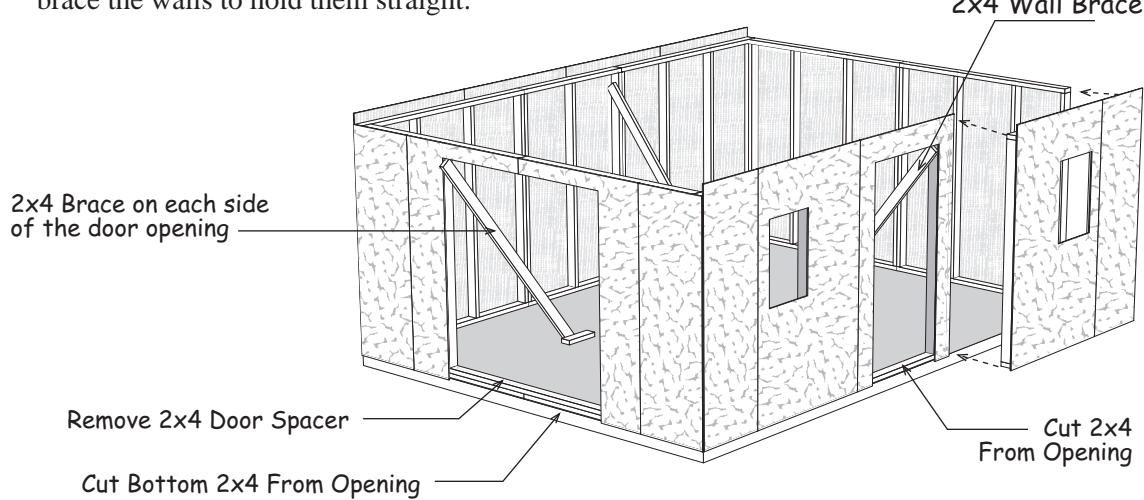


Step 10 Set Wall Panels

1. Set the back wall panel between the end walls. Secure wall panels together at the corners. Use (4) four 10d coated nails per corner. Nail wall panels to the floor. Nail through the bottom plate. Space 10d sinkers 24" apart.
2. Install the last siding panel on the back wall. Nail along the siding where the panels overlap.



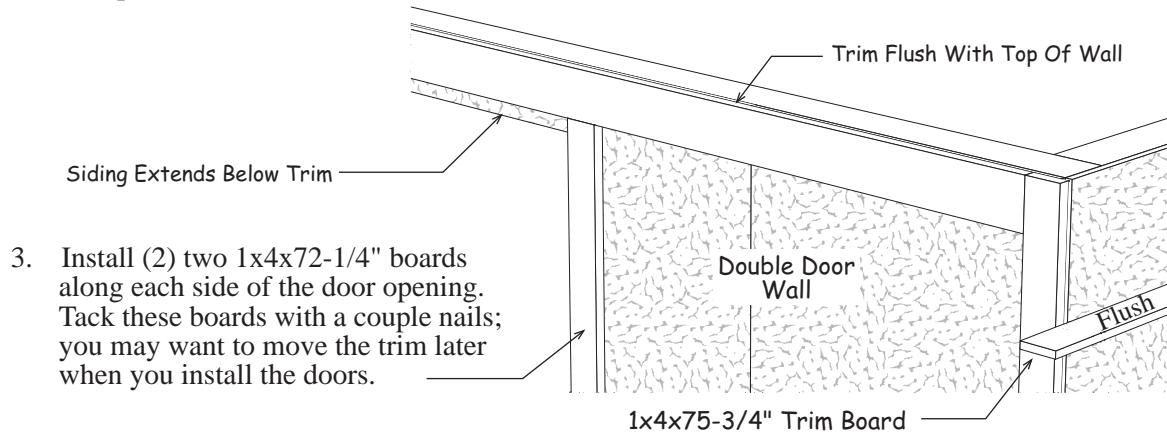
3. Set the front wall panels between the end walls.
4. Disassemble the longer shipping pallet and use (4) four 2x4s to brace the walls to hold them straight.



5. Finish nailing along siding edges that overlap adjoining wall panel.
6. Remove the door spacer from the door opening. Save for tie plate material.
7. Cut out bottom 2x4's from the door openings. Save for tie plate material.

Step 11 Install 12' End Wall Trim

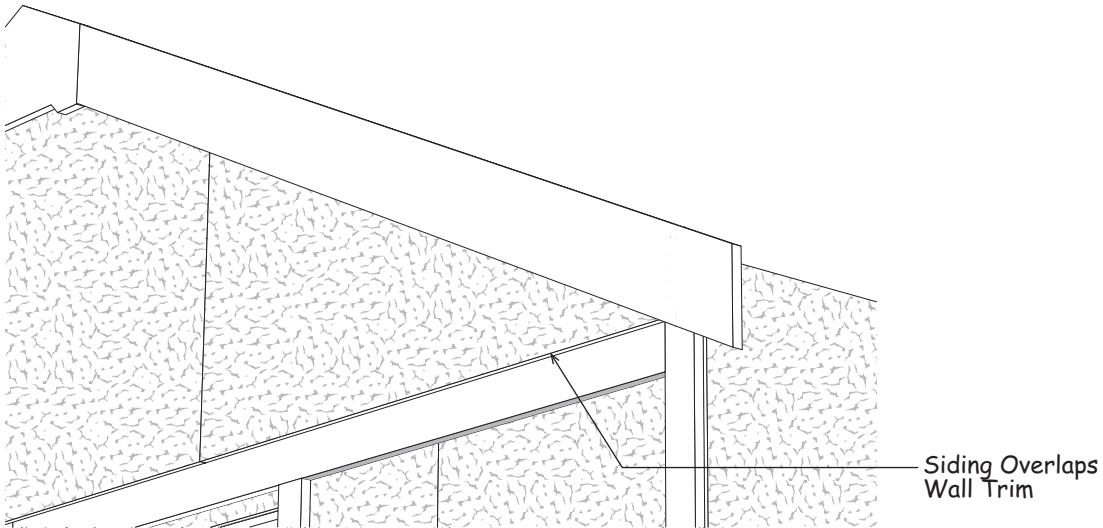
1. Install (2) two 75-3/4" long 1x4 trim boards at the corners of each 12' end wall. Install the trim flush with siding on the front and back walls. Use 8d galv. nails.
2. Cut (2) two 1x4-70" trim boards to fit between corner trim of both 12' walls. Install flush with the top of wall.



4. Install corner trim and upper wall trim to the opposite end wall.

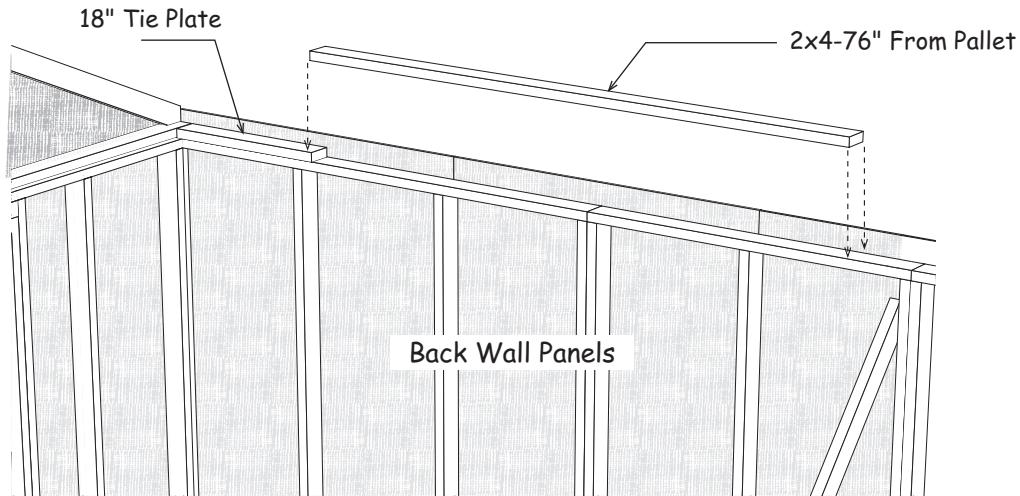
Step 12 Install End Gable Over Door Wall

Install gables on the 12' end walls. The siding will extend over the 1x4 trim on the lower wall. **NOT behind the trim.** Secure gable to wall by nailing through the gable plate with 10d sinkers. Nail siding along the overlapped 1x4 trim board with 8d galv. nails.

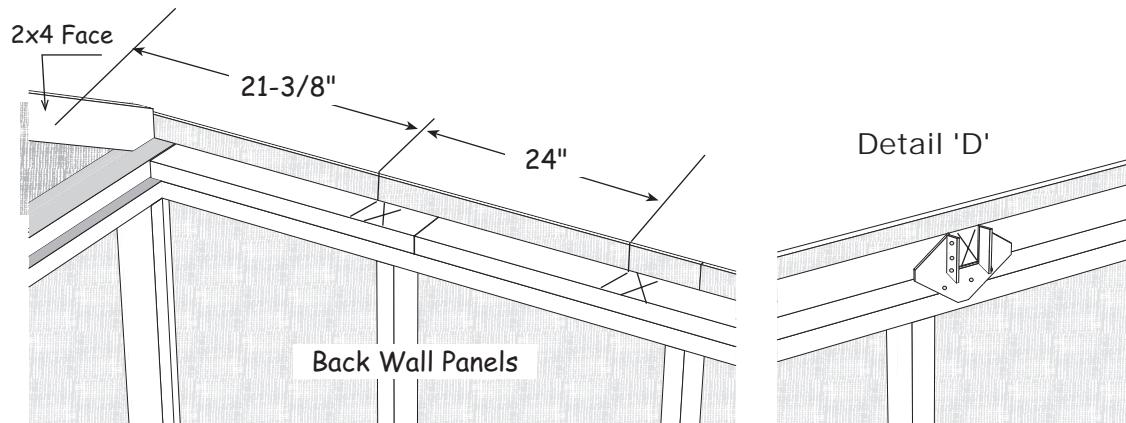


Step 13 Install 2x4 Tie Plates & Layout Roof Trusses

1. Gather 2x4s removed from the door openings in **Step 10**. Cut one of the 2x4s to a length of 18" and install the 2x4 against the gable end. Use 10d sinkers.
2. Disassemble the other shipping pallet. Install (2) two of the 76" long 2x4s next to the 2x4 installed above. Cut another 2x4 (from **Step 10**) to finish.
3. Repeat process to install 2x4 tie plates on the opposite wall.

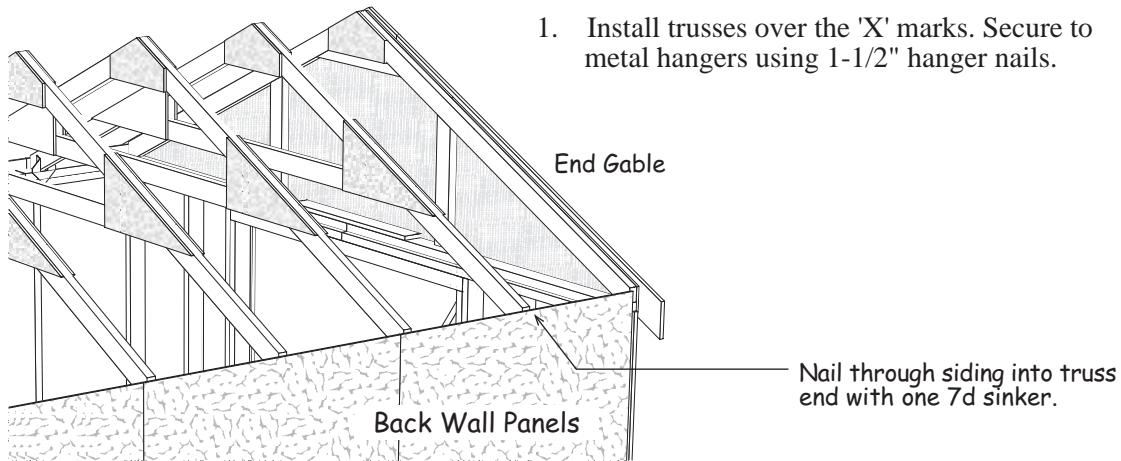


4. Layout the truss spacing. Facing the front of the building, start measuring from the left corner. Measure from the 2x4 face of the gable when marking the location of the first truss. The last truss space will be wider. **Important:** When marking the opposite wall, place the 'X' mark on the same side of the line so your trusses are parallel when installed.
5. Using 1-1/2" hanger nails, install metal hangers to the 2x4 tie plate. Align the opening center of the 'X' mark and bottom of the opening flush with the 2x4 tie plate. See **Detail 'D'**.

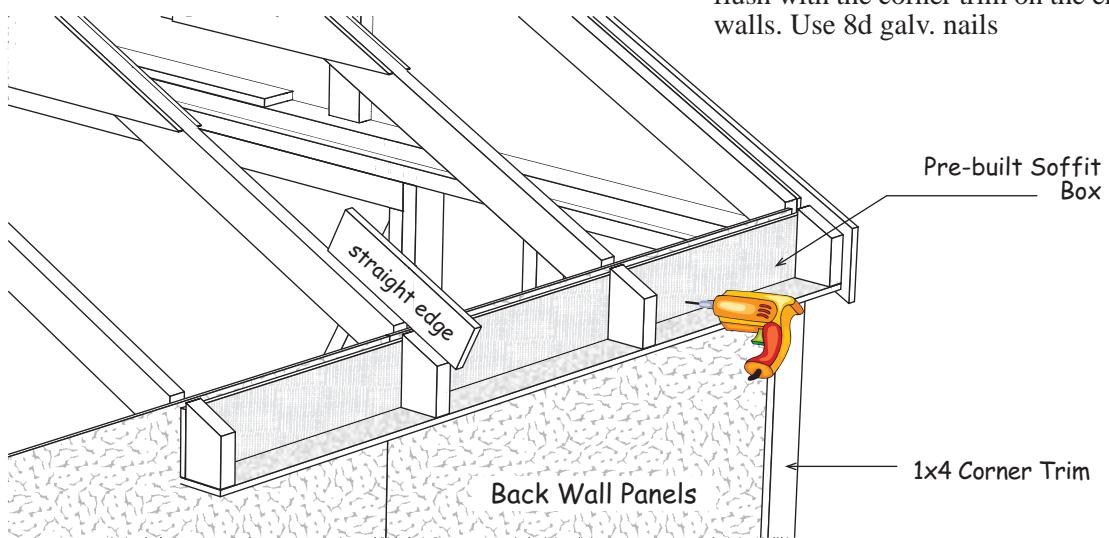


Step 14 Set Roof Trusses & Overhang

1. Install trusses over the 'X' marks. Secure to metal hangers using 1-1/2" hanger nails.



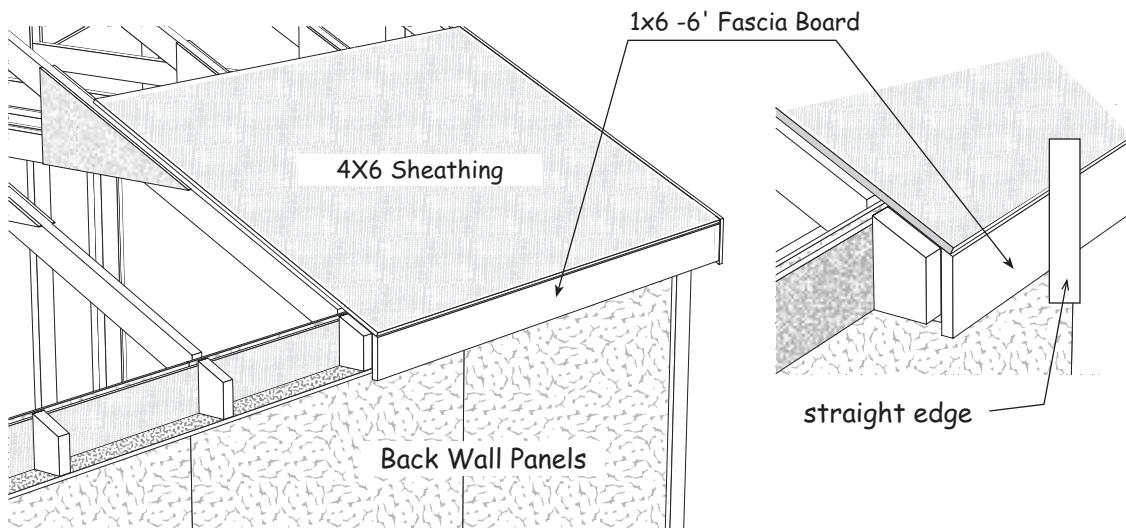
2. Install 6' long pre-built soffit overhang boxes on the front and back walls. Use a straight edge to align the top of the 2x4 blocks, *in the overhang*, flush with the top of the roof trusses. Screw the soffit overhang to the walls with 2-1/4" long wood screws. Use (2) two screws between the small 2x4 blocks.
3. Install 73-1/4" long 1x4 trim boards flush with the corner trim on the end walls. Use 8d galv. nails



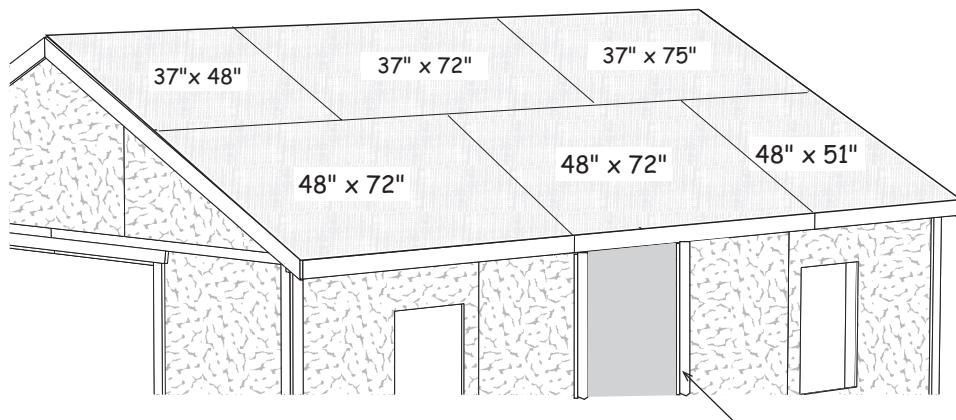
3. Install another 6' long pre-built soffit overhang box on the front and back walls.
4. Install a 51" long soffit box to finish. **Caution:** there is a left and right for this size.
5. Install 1x4 corner trim on the remaining corners.

Step 15 Install 1x6 Fascia & Roof Sheathing

1. Install a 1x6-6' fascia board on the soffit box, beveled edge flush with the top of the soffit blocks. Use 8d galv. nails. Install another 6' fascia board and finish with a 51" long 1x6 board.
2. Install 1x6 fascia boards on the front soffit boxes.
3. Install a 4'x6' roof sheathing panel with the bottom edge flush with the face of the 1x6 fascia. Make sure the trusses are plumb and the roof sheathing meets the center of the truss. Use 7d sinkers spaced 12" apart.



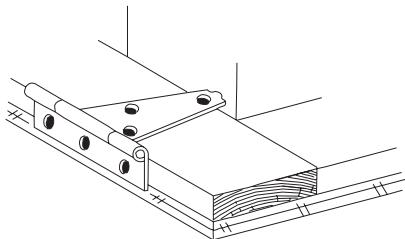
4. Install the remaining roof sheathing per layout below. The top row of roof sheathing will be about 1" below the ridge to allow for optional ridge venting.



5. Install (2) two 1x4x73-1/4" boards along each side of the front door opening. Tack these boards with a couple nails; you may want to move the trim later when you install the doors.

Step 14 Install Doors & Hardware

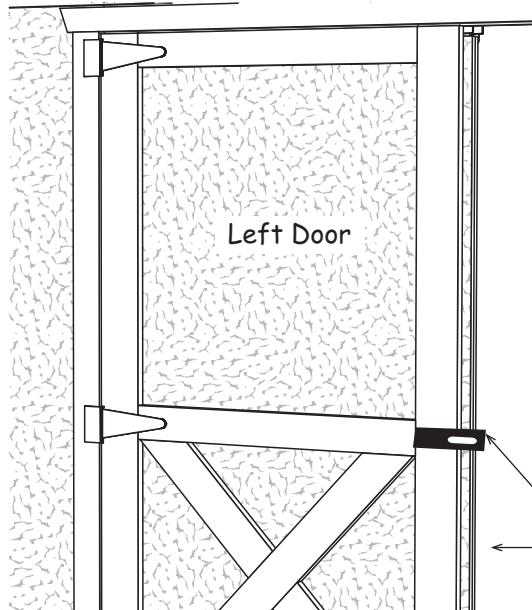
1. Locate the door marked (Single) on the back door frame. Lay this door on a level surface with the trim facing up. Depending on which way you want the door to swing, install (3) three 5" hinges on the left or right side of the door. To position the hinge properly, hold the rectangular plate against the frame. Use 1-3/4" black screws.



2. Lay the left door with the trim facing up. The siding on the left door extends past the door trim. See detail below.
3. Install 5" hinges to the left side of the door frame.
4. Install hinges to the right side of the other door.

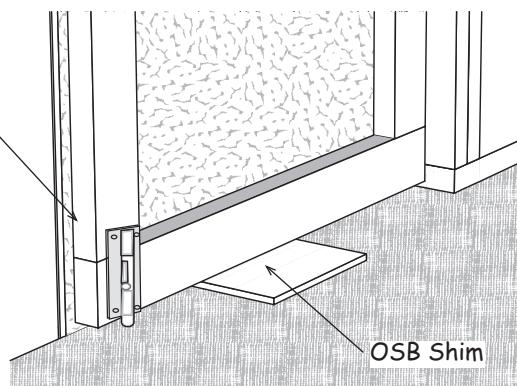
5. Temporarily prop the doors in the opening. Leave a space at the top of the doors and between the doors and the side trim to allow room for the doors to expand when they absorb moisture. Use OSB shim to support bottom of doors.

If your door opening is out of square, the space around the doors will not be even. You can remove and reposition the side trim to make allowances for this. The side trim does not have to be flush with the frame of the door opening. You can move the trim in or out to make the door spacing equal.



6. Install hinges to trim with 2" black screws.

7. Install a barrel bolt on the bottom of inside of left door to secure this door in place when closed. You will need to drill a hole in the floor for the round shaft to drop into.
8. Install another barrel bolt at the top of the door.



Packing List For Material Shipped on Shorter Pallet

Qty.	2x4 Framing	Size	Qty.	White Pine Trim	Size
46	Wall Studs & Plates	72 "	4	1x4 Corner Trim	75 3/4"
2	Wall Studs w/ header supports	72 "	6	1x4 Corner & Door Trim	73 1/4"
8	Wall Plates	68 1/2"	4	1x4 Wall Trim	70 "
2	Wall Plates	48 "	2	1x4 Door Trim	72 1/2"
4	Gable Studs angled end	23 1/2"	2	White Pine Gable Keystone	16" x 10"
<i>Pre-Built Components</i>			<i>Hardware</i>		
3	32" x 72" Barn Doors		32	2-1/2" Soffit Screws	3 lb. 10d Sinkers
1	48" x 75" Wall Frame With Door opening		24	2-1/2" Deck Screws	3 lb. 8d Galv.
1	2-1/2" x 67-1/2" Door Header		74	Black Hinge Screws	2 lb. 7d Sinkers
<i>Miscellaneous Lumber</i>			6	1x4 Drive-on Plate	3 lb. 6d Common
10	2x4 Blocks for Truss Jig	10"	9	5" Door Hinges	1 lb. 6d Galv.
14	Wood Gussets for Trusses	8" x 20"	2	Door Hasp	1 lb. Hanger Nails
28	Wood Gussets for Trusses	12" x 24"	2	Bottle Wood Glue	2 Barrel Bolts
2	3/4" Plywood Gble Nailer	3-1/2" x 31-3/4"	2	2" Screw Bits	14 Truss Hangers

Packing List For Material Shipped on Longer Pallet

Qty.	2x4 Framing	Size	Qty.	White Pine Trim	Size		
7	Truss Collar Ties	82 "	4	1x6 Gable Trim	80"		
18	Truss Rafters	80 1/2"	4	1x6 Side Wall Fascia	72"		
4	Pre-built Soffit Boxes	72 "	2	1x6 Side Wall Fascia	51"		
2	Pre-built Soffit Boxes	51 "					
<i>LP Primed Exterior Siding</i>			<i>7/16" OSB Sheathing</i>				
7	48" x 79-1/2"	3	48" x 75-3/4"	4	48" x 72"	2	37" x 72"
2	24" x 79-1/2"	2	16" x 75-3/4"	2	48" x 51"	2	37" x 48"
2	24" x 75-3/4"	2	32-1/2" x 4-3/4"	2	37" x 75"		
6	48" Gable Siding Panels - angle cut on top						

Building Size		Material List
16' x 12'	20' x 12'	
9 bdl.	11 bdl.	Roof Shingles by Owner
8 pcs.	9 pcs.	Roof 'drip' Edge-10' by Owner

Install metal roof edge the perimeter of the building. Install shingles according to the instructions on the wrapper. If you need more detailed instructions on installing shingles, there are good publications at book stores.